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Retail Rate and Cost Issues with Renewable Development

May 22, 2012

Some Rate Design Observations

- Rate design is where cost-based allocated revenues, forecast billing determinants, and policy considerations are combined to develop retail rate levels.
- Historical metering infrastructure dictated less precise rate designs (e.g. energy only rates for residential and small commercial customers).
- Additionally, we must account for regulatory and legislative requirements and considerations.
  - The combined effect of SB 695, the state's conservation goals, and "affordability" are examples of where rate designs deviate from their cost basis.
  - Dynamic pricing is now facilitated by state-wide "smart" meter deployment.

Where we are Today –
Compounded Affordability Concerns Distort the Market at Both Ends

Residential Accounts by Customer Type and Usage Level

Average Monthly Usage, Bills, and Rate Levels

Customer Type	Average Monthly Usage Range (kWh)	Number of Accounts	Average Monthly Usage (kWh/Cust)	Average Monthly Bill	Average Rate (cents/kWh)
CARE	**All**	**1,350,314**	**516**	**$62**	**12.0**
	< 400	570,547	264	$26	9.8
	400-800	576,106	566	$65	11.6
	> 800	203,661	1,083	$153	14.1
NON-CARE	**All**	**2,646,284**	**594**	**$106**	**17.9**
	< 400	943,221	251	$34	13.7
	400-800	1,121,262	575	$92	16.1
	> 800	581,801	1,188	$250	21.0

- The AB1X/SB695 induced rate gaps are large and will continue to grow

Large compounded subsidies.

Bypass of inflated retail rates subsidizes D-Gen business models.

Residential Solar Accounts
– Average Monthly Usage Before and After PV Installation

Tier Level	Pre-Solar Avg. Usage (kWh)	Post-Solar Avg. Usage (kWh)	Displaced Energy (kWh)	Rate (¢/kWh)
Tier 1	349	252	97	12.5
Tier 2	98	56	42	14.8
Tier 3	203	97	106	22.9
Tier 4	214	76	138	26.4
Tier 5	310	98	213	29.9
Total	1,174	579	596	23.9

	Usage Distribution		
Tier Level	Pre-Solar	Post-Solar	PV Generation Distribution
Tier 1	30%	43%	16%
Tier 2	8%	10%	7%
Tier 3	17%	17%	18%
Tier 4	18%	13%	23%
Tier 5	26%	17%	36%
Total	100%	100%	100%

Weighted average of PV generation distribution and tiered rate levels provides an average retail benefit of $0.24/kWh.

Average residential retail rate (all rate components) is $0.16/kWh.

Notes:
Accounts with PV system installed between Jan 2010 and Apr 2010.
Accounts with at least 120 days of billing data pre- and post-solar.
Pre-Solar: Jan 2009 - Dec 2009
Post-Solar: Jul 2010 - Jun 2011
1,676 total accounts

Rate Design and Renewable Energy Subsidies

- SCE's Net Energy Metering subsidies total almost $50M/year at current rate levels and a little over 1% of system peak, the generally accepted definition of "aggregate customer peak demand".
- At the current NEM cap of 5%, this subsidy grows to nearly $250M/year.
- This level of subsidization doubles again if "aggregate customer peak demand" is re-defined as the sum of individual customers' peak demands.

SCE Dynamic Pricing Deployment

Customer Group	SCE 2012 GRC Phase 2 (as filed)
Residential	**Tiered Rate Structure (4 tiers)** **Default Peak Time Rebate** **Opt-in CPP, Opt-in TOU (2-tiered), Opt-in RTP** **Effective January 2013*
Small C&I *(< 20 kW)*	**Mandatory TOU** **Opt-in Critical Peak Pricing (w/TOU), Opt-in RTP** **Transition beginning in 2013*
Medium C&I *(20 to 200 kW)*	**Mandatory TOU** **Opt-in Critical Peak Pricing (w/TOU), Opt-in RTP** **Transition beginning in 2013*
Large C&I *(> 200 kW)*	**Default CPP** **Mandatory TOU, Opt-in RTP** **Effective October 2009*
Small / Medium Agricultural *(< 200 kW)*	**Mandatory TOU** **Opt-in Critical Peak Pricing (w/TOU), Opt-in RTP** **Transition beginning in 2013*
Large Agriculture *(> 200 kW)*	**Default CPP** **Mandatory TOU, Opt-in RTP** **Effective October 2009*